

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 16107 3/23/2001]

[Docket No. 99-NM-60-AD; Amendment 39-12149; AD 2001-06-02]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-8 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-8 series -10 through -50, -61, -61F, -71, -71F airplanes, that currently requires a visual or eddy current inspection(s) of the left and right wing front spar lower caps to detect cracks migrating from attachment holes; and repair, if necessary. That AD also provides for an optional terminating modification of the front spar lower cap. This amendment is prompted by a report that additional cracking was found in the front spar lower cap of a wing. This amendment requires accomplishment of the previously optional terminating action. This amendment also expands the applicability of the existing AD to include additional airplanes and increases the interval for the repetitive eddy current inspections. The actions specified by this AD are intended to prevent reduced structural integrity of the left or right wing due to metal fatigue failure of the front spar lower cap.

DATES: Effective April 27, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of April 27, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.
FOR FURTHER INFORMATION CONTACT: Greg DiLibero, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone (562) 627-5231; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 86-20-08, amendment 39-5434 (51 FR 35502, October 6, 1986), which is applicable to certain McDonnell Douglas Model DC-8 series airplanes, was published in the **Federal Register** on May 10, 2000 (65 FR 30028). The action proposed to continue to require an eddy current inspection(s) to detect cracks of the lower front spar caps of the wings at the attachment holes of the leading edge assembly between stations Xfs=515.000 and Xfs=526.760, and corrective actions, if necessary. The action also proposed to require accomplishment of the previously optional terminating action and a follow-on inspection. In addition, the action proposed to expand the applicability of the existing AD to include additional

airplanes that are subject to the identified unsafe condition of this AD and to increase the interval for the repetitive eddy current inspections.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Incorrect Reference to Superseded AD

Two commenters point out that the proposed AD incorrectly references AD 86-20-06 as the AD being superseded instead of AD 86-20-08. The FAA finds that the commenters are correct and has revised the final rule accordingly.

Request to Supersede AD 90-16-05

One commenter requests that the proposed AD also supersede AD 90-16-05, amendment 39-6614 (55 FR 31818, August 6, 1990), as it pertains to McDonnell Douglas Service Bulletin 57-90, Revision 2, dated March 1, 1991. The commenter states that superseding AD 90-16-05 would ensure that there is no conflict between the inspection and modification requirements of both AD's.

The FAA partially agrees. We acknowledge that there is a conflict between the eddy current inspection requirements of the proposed AD and AD 90-16-05 with respect to the revision level of McDonnell Douglas Service Bulletin (SB) DC8-57-090 (formerly numbered 57-90). We find that accomplishment of the eddy current inspection(s) required by this AD per Revision 05 of SB DC8-57-090 constitutes compliance with the inspection(s) required by paragraph A. of AD 90-16-05, as it pertains to SB 57-90, Revision 2. However, accomplishment of the eddy current inspection(s) does not terminate the remaining requirements of AD 90-16-05, as it applies to other service bulletins. Operators are required to continue to inspect and/or modify per the other service bulletins listed in that AD. Therefore, we have revised the final rule to include a new paragraph (h) to specify this information.

Request to Exclude Certain Airplanes or Give Credit for Doing a Certain Modification

One commenter requests that either paragraph (b) or the applicability of the proposed AD be reworded to exclude airplanes modified per McDonnell Douglas DC-8 Service Bulletin 57-90, original issue, dated October 3, 1983, or that note 5 be revised to include the original service bulletin. The commenter states that some airplanes have done the optional terminating modification specified in AD 86-20-08, which referenced the original issue of SB 57-90 as the appropriate source of service information, or the modification specified in paragraph (f) of the proposed AD. The commenter states that it is not clear which paragraphs of the proposed AD are applicable to airplanes that have been modified per the original issue of SB 57-90.

The FAA agrees that paragraph (b) and note 5 of the proposed AD should be revised as the commenter requests. We find that the applicability of paragraph (b) is unclear. Our intent was that paragraph (b) of the AD apply to all affected airplanes listed in Revision 05 of SB DC8-57-090 that are not listed in the original issue of that service bulletin (approximately 140 additional airplanes), and on which the modification specified in any of the following McDonnell Douglas DC-8 service bulletins has not been done:

Service Bulletin	Revision level	Date
57-90	Original	October 3, 1983
57-90	1	June 16, 1988
57-90	2	March 1, 1991
57-90	3	March 25, 1992
57-90	4	March 3, 1995
DC8-57-090	05	June 16, 1997

We have revised paragraph (b) of the final rule accordingly. Also, see the change below under the heading "Explanation of Change to Applicability of Paragraph (a) of the AD" and "Explanation of Change to note 5 of the AD."

Request to Revise Compliance Time of Paragraph (e) of the Proposed AD

One commenter asks if the compliance time in paragraph (e) of the proposed AD was intended to be before 100,000 “total” flight hours. No justification was given by the commenter. The FAA finds that the compliance time identified in the proposed AD is not consistent with the compliance time of related AD 90-16-05, which requires the modification to be completed before the airplane accumulates 100,000 “total” flight hours. Therefore, we have revised the compliance time of paragraph (e) of the final rule to state that the modification must be done before the accumulation of 100,000 “total” flight hours.

Explanation of Change to Applicability of Paragraph (a) of the AD

The FAA has determined that the applicability of paragraph (a) of the proposed AD should be revised. We have approved the modification described in the service bulletins listed in the table above (under the heading “Request to Exclude Certain Airplanes or Give Credit for Doing a Certain Modification”) for compliance with the requirements of paragraph (a) of this AD. Therefore, we have added an identical table in paragraph (a) of the final rule (i.e., Table 1. Applicable Service Bulletins for Preventative Modification) and revised the applicability of that paragraph to exclude airplanes on which the modification specified in any of the service bulletins listed in that table has been done.

Explanation of Change to Note 5 of the AD

Note 5 of the proposed AD contained a typographical error. Accomplishment of the modification specified in note 5 of the AD is considered acceptable for compliance with the requirements of paragraph (e) of the AD, not paragraph (d). In addition, modification of the lower front spar cap accomplished before the effective date of this AD per McDonnell Douglas DC-8 Service Bulletin 57-90, dated October 3, 1983, in addition to the other revision levels specified in note 5, is considered acceptable for compliance with the requirements of paragraph (e) of the AD. The FAA has revised note 5 of the final rule accordingly.

Clarification of Compliance Time of Paragraph (g) of the AD

The FAA considers that the compliance time in paragraph (g) of the proposed AD is not clear as it is currently worded, and that operators may misinterpret when the follow-on inspection must be done. Our intent was that the follow-on inspection be done within 32,900 flight hours after accomplishing the modification (reference Service Bulletin DC8-57-090 or 57-90) required by AD 86-20-08, AD 90-16-05, or either paragraph (d)(1) or (e) of the proposed AD; all of these modifications are identical.

Note 5 of the proposed AD gives operators credit for accomplishing the subject modification before the effective date of the AD (i.e., operators that accomplished the subject modification specified in AD 86-20-08, which was optional in that AD). Paragraph (f) of the proposed AD also gives operators credit for accomplishing the subject modification per paragraph B. of AD 90-16-05. If an operator takes credit for accomplishing the modification in note 5 or paragraph (f) of the AD, it was our intent in the proposed AD that the operator do the follow-on inspection and corrective actions, if necessary, per paragraph (g) of the AD. Therefore, for clarification purposes, we have revised the compliance time of paragraph (g) of the final rule to “within 32,900 flight hours after accomplishing the modification...” and to reference the modification specified in AD’s 86-20-08 and 90-16-05.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 294 Model DC-8 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 251 airplanes of U.S. registry will be affected by this AD.

It will take approximately 2 work hours per airplane to accomplish the required inspection at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the inspection required by this AD on U.S. operators is estimated to be \$30,120, or \$120 per airplane, per inspection cycle.

It will take approximately between 12 and 14 work hours per airplane to accomplish the required modification at an average labor rate of \$60 per work hour. Required parts will cost approximately between \$303 and \$1,202 per airplane. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be between \$256,773, or \$512,542, or between \$1,023, or \$2,042 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-5434 (51 FR 35502, October 6, 1986), and by adding a new airworthiness directive (AD), amendment 39-12149, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-06-02 MCDONNELL DOUGLAS: Amendment 39-12149. Docket 99-NM-60-AD.
Supersedes AD 86-20-08, Amendment 39-5434.

Applicability: Model DC-8 series airplanes, as listed in McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (i) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent reduced structural integrity of the left or right wing due to metal fatigue failure of the front spar lower cap, accomplish the following:

Note 2: This AD will affect the inspections, corrective actions, and reports required by AD 93-01-15, amendment 39-8469 (58 FR 5576, January 22, 1993), for Principal Structural Elements (PSE) 57.08.021 and 57.08.022 of the DC-8 Supplemental Inspection Document (SID).

Note 3: Where there are differences between this AD and the referenced service bulletin, the AD prevails.

Eddy Current Inspection

(a) For Model DC-8-10 through DC-8-50, inclusive, DC-8-61, -61F, -71, and -71F series airplanes, equipped with left or right wing front spar lower cap, part number (P/N) 5597838-1 or -2; not modified per any of the McDonnell Douglas DC-8 service bulletins listed in Table 1 of this AD: Do an eddy current inspection to detect cracks of the lower front spar caps of the wings at the attachment holes of the leading edge assembly between stations Xfs=515.000 and Xfs=526.760, per McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997; at the time specified in either paragraph (a)(1), (a)(2), or (a)(3) of this AD, as applicable. Table 1 is as follows:

Table 1. Applicable Service Bulletins for Preventative Modification.

Service Bulletin	Revision level	Date
57-90	Original	October 3, 1983
57-90	1	June 16, 1988

Service Bulletin	Revision level	Date
57-90	2	March 1, 1991
57-90	3	March 25, 1992
57-90	4	March 3, 1995
DC8-57-090	05	June 16, 1997

Note 4: Eddy current inspections done before the effective date of this AD per McDonnell Douglas DC-8 Service Bulletin 57-90, Revision 1, dated June 16, 1988; Revision 2, dated March 1, 1991; Revision 3, dated March 25, 1992; or Revision 4, dated March 3, 1995; are considered acceptable for compliance with the requirements of paragraph (a) of this AD.

(1) For airplanes on which the immediately preceding inspection was conducted using eddy current techniques per AD 86-20-08 before the effective date of this AD: Inspect within 3,600 flight hours or 3 years after accomplishment of the last eddy current inspection, whichever occurs first.

(2) For airplanes on which the immediately preceding inspection was conducted visually per AD 86-20-08 before the effective date of this AD: Inspect within 3,200 flight hours or 2 years after accomplishment of the last visual inspection, whichever occurs first.

(3) For airplanes on which a visual or eddy current inspection or the modification required by AD 86-20-08 has not been done: Inspect before the accumulation of 30,000 total flight hours, or within 200 flight hours after the effective date of this AD.

(b) For airplanes other than those identified in paragraph (a) of this AD; not modified per any of the McDonnell Douglas DC-8 service bulletins listed in Table 1 of this AD: Within 3,200 flight hours or 2 years after the effective date of this AD, whichever occurs first, do the eddy current inspection specified in paragraph (a) of this AD.

Repetitive Inspections

(c) If no crack is detected during any inspection required by this AD, repeat the eddy current inspection every 3,600 flight hours or 3 years, whichever occurs first.

Repair

(d) If any crack is detected during any inspection required this AD, before further flight, do the action specified in either paragraph (d)(1) or (d)(2) of this AD, as applicable.

(1) For cracks within the limits specified in Conditions 2 through 6, inclusive, Table 1 of paragraph 3.B.4 of the Accomplishment Instructions of McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997: Modify the lower front spar cap per McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997. Accomplishment of the modification constitutes compliance with the requirements paragraphs (c) and (e) of this AD.

(2) For cracks that exceed the limits specified in Conditions 2 through 6, inclusive, Table 1 of paragraph 3.B.4 of the Accomplishment Instructions of McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997: Repair per a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA.

Preventative Modification

(e) Before the accumulation of 100,000 total flight hours, modify the lower front spar cap per paragraph 3.B.2.B of the Accomplishment Instructions of McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997. Accomplishment of the modification constitutes compliance with the requirements paragraphs (a) and (b) of this AD and terminates the repetitive inspection requirements of paragraph (c) of this AD.

Note 5: Modification of the lower front spar cap accomplished before the effective date of this AD per McDonnell Douglas DC-8 Service Bulletin 57-90, dated October 3, 1993; Revision 1, dated June 16, 1988; Revision 2, dated March 1, 1991; Revision 3, dated March 25, 1992; or Revision 4, dated March 3, 1995; is considered acceptable for compliance with the requirements of paragraph (e) of this AD.

(f) Accomplishment of the modification required by paragraph B. of AD 90-16-05, amendment 39-6614 (55 FR 31818, August 6, 1990) (which references “DC-8 Aging Aircraft Service Action Requirements Document” (SARD), McDonnell Douglas Report MDC K1579, Revision A, dated March 1, 1990, as the appropriate source of service information for accomplishing the modification) constitutes compliance with paragraphs (a), (b), and (e) of this AD and terminates the repetitive inspection requirements of paragraph (c) of this AD.

Follow-On Inspection

(g) Within 32,900 flight hours after accomplishment of the modification specified in paragraph (g)(1), (g)(2), (g)(3), or (g)(4) of this AD, or within 2 years after the effective date of this AD, whichever occurs later, perform an inspection to detect cracks in the area specified in paragraph (a) of this AD, and corrective actions, if necessary; per a method approved by the Manager, Los Angeles ACO.

- (1) Modification required by paragraph (d)(1) of this AD;
- (2) Modification required by paragraph (e) of this AD;
- (3) Modification specified in paragraph D. of AD 86-20-08; or
- (4) Modification required by paragraph B. of AD 90-16-05.

Certain Actions Constitute Compliance with AD 90-16-05

(h) Accomplishment of the eddy current inspection(s) required by this AD constitutes compliance with the inspections required by paragraph A. of AD 90-16-05, as it pertains to McDonnell Douglas DC-8 Service Bulletin 57-90, Revision 2, dated March 1, 1991.

Accomplishment of the eddy current inspection(s) does not terminate the remaining requirements of AD 90-16-05, as it applies to other service bulletins. Operators are required to continue to inspect and/or modify per the other service bulletins listed in that AD.

Alternative Methods of Compliance

(i) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO, FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 6: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(k) Except as provided by paragraphs (d)(2) and (g) of this AD, the actions shall be done in accordance with McDonnell Douglas Service Bulletin DC8-57-090, Revision 05, dated June 16, 1997. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach,

California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the FAA, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

- (1) This amendment becomes effective on April 27, 2001.

FOR FURTHER INFORMATION CONTACT: Greg DiLibero, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone (562) 627-5231; fax (562) 627-5210.

Issued in Renton, Washington, on March 12, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.